

CLAIMS

What is claimed is:

1. A method of reflowing an electronic document file so that both text and graphics can be viewed as a reflowed document image on a target display having a predetermined target display width comprising:

generating an image file of said electronic document if said electronic document
5 does not exist as an image file;
identifying graphics blocks in said image file;
identifying word locations in said image file;
generating reflowed document image positions for said word locations so that said text in said reflowed document image does not normally exceed said target display width.

2. The method of claim 1 further comprising:

scaling graphics blocks that may exist in said image file so that said graphics blocks do not exceed said target display width;
generating a reflowed document image position for said graphics.

3. A method of reflowing an electronic document file so that both text and graphics can be viewed as a reflowed document image on a target display having a predetermined target display width comprising:

generating an image file of said electronic document if said electronic document
5 does not exist as an image file;
identifying text blocks and graphics blocks in said image file;
identifying word locations of said text in said text blocks;
generating reflowed document image positions for said word locations so that said text in said reflowed document image does not normally exceed said target display
10 width;

scaling graphics blocks that may exist in said image file so that said graphics blocks do not exceed said target display width;
generating a reflowed document image position for said graphics.

4. The method of claim 3 further comprising:

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scaling said text blocks so that said text appears on said target display having a predetermined size.

5. The method of claim 4 wherein scaling of said text blocks is performed by adjusting the resolution of said text blocks.

6. The method of claim 3 further comprising:

identifying text blocks having standard size text;

identifying text blocks having non-standard size text;

scaling said text blocks having standard size text using a first scaling factor;

5 scaling said text blocks having non-standard size text using at least one additional scaling factor.

7. The method of claim 6 wherein:

said scaling of said text blocks is performed by adjusting the resolution of said text blocks;

5 said scaling of said graphics blocks is performed by adjusting the resolution of said text blocks.

8. The method of claim 7 wherein adjusting the resolution of said text blocks and said graphics blocks is performed using data reduction techniques.

9. The method of claim 6 wherein said first scaling factor are selected by a user of said target device.

10. The method of claim 6 wherein said first scaling factor and said at least one additional scaling factor is selected by a user of said target device.

11. The method of claim 10 wherein said target device is a display device for users having low vision.

12. The method of claim 3 further comprising:

compressing said image file using image compression techniques.

13. The method of claim 6 further comprising:

compressing said image file using image compression techniques.

14. A system for reflowing an electronic document for viewing of text and graphics on a display of a target device having a predetermined width as a reflowed document image comprising:

image conversion code that generates an image file of said electronic document if

5 said electronic document does not exist as an image file;
 page decomposition code that identifies text blocks and graphics blocks in said
 image file and that identifies word locations of said text in said text blocks;
 reflowing code that generates reflowed document image positions for said word
 locations so that said text in said reflowed document image does not normally exceed
 10 said predetermined width of said display.

15. The system of claim 14 further comprising:

 scaling code that scales said text blocks and said graphics blocks according to
 scaling factors.

16. The system of claim 15 wherein said scaling factors are selected by a user of said
 system.

17. The system of claim 15 wherein said scaling factors are preset in said system.

18. The system of claim 14 further comprising:

 a computer that executes said image conversion code, said page decomposition
 code and said reflowing code.

19. The system of claim 14 wherein said target device executes said reflowing code
 and generates said reflowed document image and further comprising:

 a computer that executes said image conversion code and said page
 decomposition code.

20. A system for reflowing an electronic document for viewing of both text and
 graphics as a reflowed document image comprising:

5 a processing device that generates an image file of said electronic document if
 said electronic document does not exist as an image file, that identifies text blocks and
 graphics blocks in said image file and that identifies word locations of said text in said
 text blocks;

 a target device coupled to said processing device so that said target device
 receives said image file from said processing device, said target device including a
 processor that generates reflowed document image positions for said word locations so
 10 that said text and graphics blocks in said reflowed document image do not normally
 exceed said target display width.